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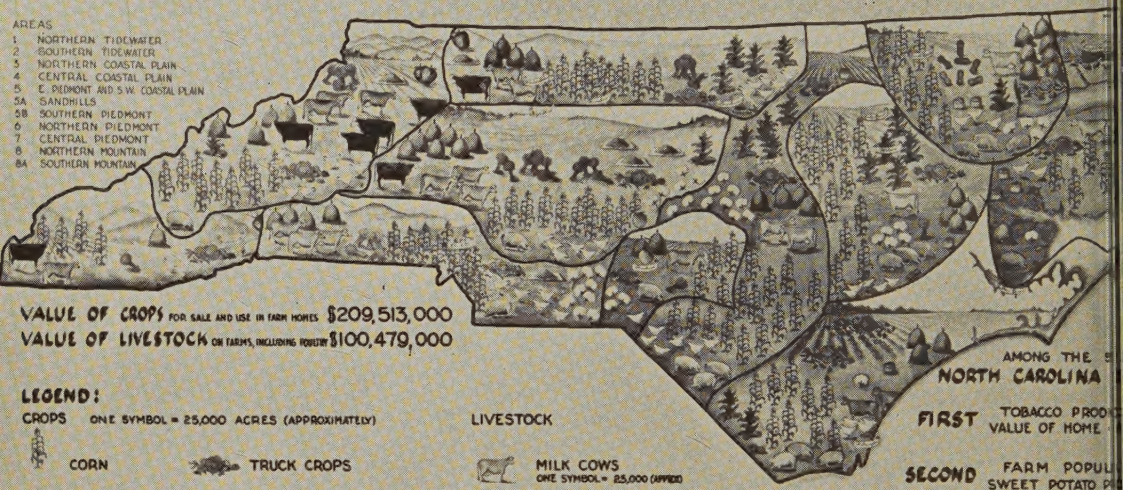
ANNUAL REPORT

NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE

1940

A DIVERSIFIED AGRICULTUR

NORTH CAROLINA FARMING AREAS PROVIDE VARIETY OF CROPS AND LIVES



VALUE OF CROPS FOR SALE AND USE IN FARM HOMES $209,513,000

VALUE OF LIVESTOCK ON FARMS, INCLUDING POULTRY $100,479,000

LEGEND:

CROPS ONE SYMBOL = 25,000 ACRES (APPROXIMATELY)

- CORN
- HAY
- COTTON
- SMALL GRAIN
- TOBACCO
- TRUCK CROPS
- PEANUTS, LESPEDEZA, SOYBEANS — LEGUME SEED
- APPLES, PEACHES — TREE FRUIT

LIVESTOCK

- MILK COWS — ONE SYMBOL = 25,000 (APPROX)
- BEEF CATTLE — ONE SYMBOL = 25,000 (APPROX)
- HOGS — ONE SYMBOL = 50,000 (APPROX)
- CHICKENS — ONE SYMBOL = 200,000 (APPROX)

Prepared
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North Carolina Agricultural Extension Service

AMONG THE 5
NORTH CAROLINA
FIRST TOBACCO PROD
VALUE OF HOME
SECOND FARM POPUL
SWEET POTATO P
THIRD INCOME FROM
PRODUCTION OF P
" LESPEDEZA
FOURTH PRODUCTION OF PE
LEGUME
SORGHUM S

CATTLE :: COOPERATION :: CANNING :: COMFORT

Annual Report of the Extension Service for 1940

NORTH CAROLINA STATE COLLEGE

I. O. SCHAUB, *Director*

JOHN W. GOODMAN, *Assistant Director*

Farm folk of North Carolina, supported with the counsel and active assistance of representatives of the Agricultural Extension Service, answered the rumblings of war in 1940 with a preparedness program which included: Livestock expansion to counteract loss of world markets for other commodities; cooperation in agricultural adjustment; conservation and planning programs; canning for home security; and mattress-making for comfort and for physical and mental strength.

Highly significant of all that happened in rural North Carolina in 1940 was, first, the opening of a two-million-dollar milk market through the development of dairy manufacturing plants centered in the Piedmont; and, second, the importation of 500 purebred beef-type bulls and more than 5,000 high grade heifers and cows, most of them being purchased by tobacco and cotton farmers. The Extension Service had an important part in both of these developments.

Estimates of the Crop Reporting Board show that there were 20,000 more cattle in the State in 1940 than in 1939, a gain from 664,000 to 684,000 animals of all types. Milk cows increased by 8,000—from 377,000 head to 385,000 head. Also encouraging to Extension efforts towards diversification were the 10,337,000 chickens found on North Carolina farms. This is 323,000 more chickens than in 1939.

Growth of the dairy industry during the year was the greatest in the history of North Carolina, with farmers receiving $13,405,000 in cash for the products of their cows. Another 25½ million dollars worth of milk, butter and cheese was consumed on the farms, making the total worth of the dairy industry approximately 39 million dollars.

The 124 dairy processing plants in the State paid $2,000,000 for farm milk, produced without the necessity of expensive barns and other equipment. Most of the income from this source was new in 1940, because the largest of the plants opened during the year with the support of Extension agents and specialists in organizing milk routes, and another large company expanded its operations.

Supplementary income from livestock enterprises was welcomed in 1940. Loss of export markets dropped tobacco income in the State from $122,071,000 in 1939 to $91,212,000 in 1940, a decline of $30,859,000. Despite this depressing situation, cash income from all sources decreased only $20,261,000—from $242,029,000 in 1939 to $221,768,000 in 1940. Cash receipts from cotton increased $13,119,000 over 1939—from $22,807,000 to $35,926,000.

Cotton quality improvement, coming largely as a result of the One-Variety Cotton Community Program, accounted for part of the gain, but favorable weather conditions and adoption of boll weevil control measures also made a major contribution. An average yield of 425 pounds of lint cotton per acre was an all-time high for the State.

Also reflecting the success of Extension work were higher yields of other important farm crops. The average tobacco yield in 1940 was 990 pounds per acre, as compared with 939 pounds in 1939; the average peanut yield was 1,275 pounds, as compared with 1,140 pounds the previous year; the average Irish potato yield was 109 bushels per acre, as against 100 bushels in 1939; and the average soybean yield 13.5 bushels per acre, compared with an average of 12.5 bushels the year before.

Farmers Used the Ballot Box To Solve Their Problems

The Extension Service Reaches Every Member of the Rural Family

COOPERATION AND CONSERVATION

More North Carolina farmers participated in the 1940 Agricultural Conservation Program than in any previous farm program. Of the 229,000 farming units in the State, 207,000 shared in the $14,200,000 distributed in conservation payments for soil building and compliance with acreage allotments, and the $4,500,000 in parity payments. This is a decided contrast with 1939, when only 136,718 operators cooperated and earned a total of $12,500,000, including both conservation and parity payments.

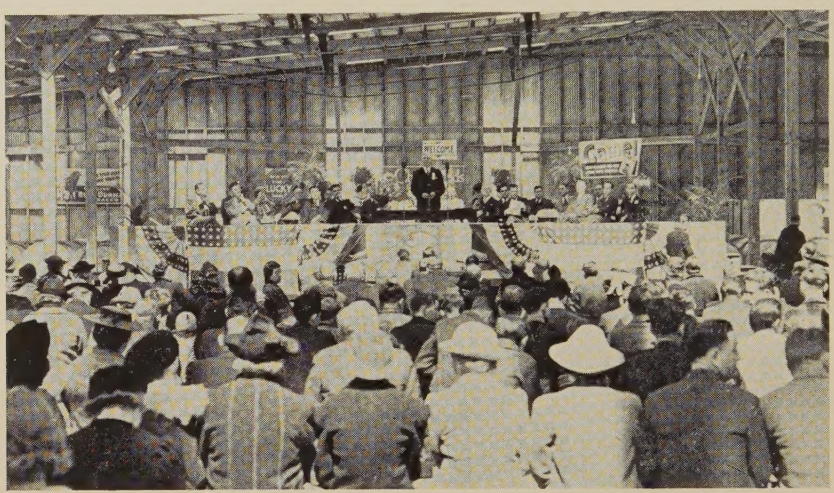
In 1940 more than 99 per cent of the tobacco and cotton farmers participated and planted within their acreage allotments. Marketing quotas were in effect on both crops.

On July 20 a total of 142,243 North Carolina flue-cured tobacco growers went to the polls and 123,863 of them, or 87.1 per cent, approved marketing quotas for their next three crops. One-year quotas were favored by 2,073 voters, and 16,307 disapproved quotas. The Nation-wide vote in favor of three-year flue-cured tobacco quotas was by a margin of 86.1 per cent.

Burley tobacco producers of the nation approved three-year quotas in a referendum on November 23 by 76.5 per cent. In North Carolina, 3,142 or 69.7 per cent, of the 4,507 farmers voting endorsed the three-year plan, 119 were for one-year quotas, and 1,246 were against quotas.

On December 7, just after the close of the Extension report year, the cotton growers of the nation voted to continue one-year quotas by 848,428 to 70,429—92.3 per cent. In North Carolina the vote of approval was by 92.8 per cent—55,937 to 4,309.

Eighty-eight per cent of the cropland in North Carolina was included in the Agricultural Conservation Program in 1940, and farmers earned 78.5 per cent of their maximum soil building payments. Both figures represent new high marks since the program was started in 1936.



63,569 Farm Meetings Attracted 1,684,191 Persons

Soil building practices carried out include the seeding of 1,065,000 acres of legumes and grasses, of which 144,000 acres were winter legumes. Green manure crops were turned under on 1,607,000 acres. Forest trees were planted for credit on 1,550 acres, and 4,000 acres of timber stands were improved. Seventeen million feet of terraces were constructed. Farmers used 283,000 tons of lime and 24,000 tons of superphosphate. With the exception of forest tree plantings, these are all new records for any year of the conservation program.

The Agricultural Adjustment Administration furnished through its grant-of-aid program 230,000 tons of limestone, 5,000 tons of triple-superphosphate, 5,000 tons of 20 per cent superphosphate, 3,000,000 pounds of Austrian winter peas, 280,000 pounds of vetch seed, and 240,000 pounds of rye grass seed.

BETTER LIVING IN RURAL HOMES

In the spring of 1940, the North Carolina Extension Service began to organize and conduct the mattress-making program for low-income families. After an extensive training period, to insure quality products, the first mattress was made in Anson County on May 11. By the end of the week of November 30, eighty counties had organized the program in 1,045 communities, and 28,304 mattresses had been made. However, at that time 64,538 applications had been received and 45,833 had been approved.

Contributing also to better living in rural homes were seven and three-quarter million containers of fruits, vegetables, meats, jams and jellies canned in 1940. This foodstuff had a value of $1,141,513, and compared with 5,455,068 containers worth $813,-066 conserved in 1939.

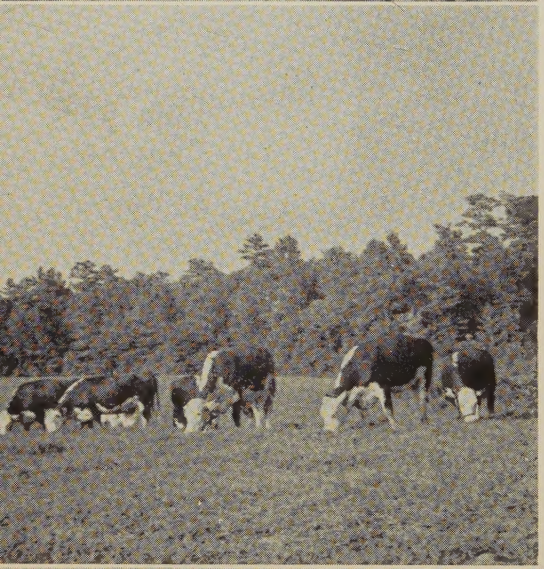
PERSONNEL

The Extension family increased in size by seven members in 1940. Six counties employed white assistant farm agents and one county added a white assistant home agent. This brought the staff to 414 workers, including 78 supervisory and subject matter specialists; 100 white farm agents, one in each county of the State; 88 white home agents; 86 white assistant farm agents, one of whom worked in two counties; 11 white assistant home agents; 33 Negro farm agents, two of whom worked in two counties each; and 18 Negro home agents.

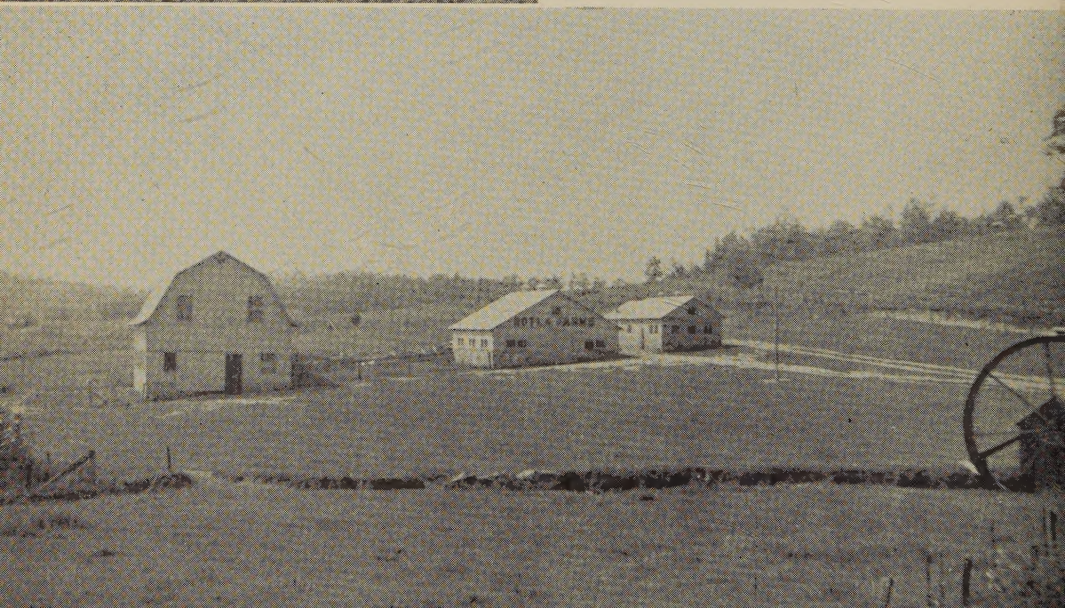
More Livestock Required More and Better Feed

Several successful auction markets for truck and vegetable crops were developed during the year, and Extension agents gave encouragement and assistance in every way possible. A summary of agents' reports shows that farm people in associations or groups organized and assisted by the Extension Service marketed $1,203,414 worth of fruits and vegetables in 1940.

Not in the history of North Carolina have farmers shown as much interest in livestock as in 1940. Numbers of cattle, of both beef and dairy breeds, increased. Pasture and feed development kept pace. In 1940 there were 684,000 head of cattle of all types and 1,230,171 acres of improved pastures on farms of the State.



An evolution from nondescript pastures, dilapidated barns and low income-producing cattle to fine sods of grass, modern barns and high quality livestock has taken place on those farms which cooperate with the Extension Service and the Tennessee Valley Authority in the Demonstration Farm Program. In 1940 there were 1,984 demonstration farms within the 15-county TVA watershed, and 934 cooperating farms outside the TVA area. This is one of the most successful phases of Extension activity in the State.

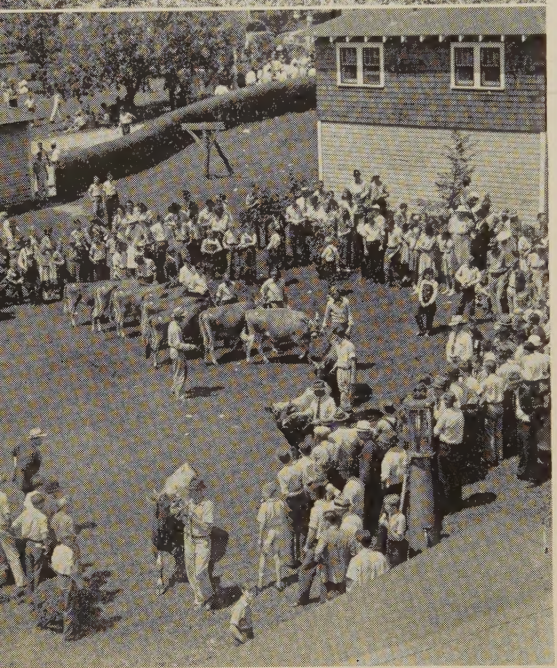


One of the methods employed in depicting to farmers the results of erosion from constant row-cropping on steep lands was the use of silt traps, such as the demonstration pictured here. Comparison of soil losses and yields of crops on slopes where close-growing crops were grown, with results where corn, tobacco, cotton and other row crops were grown continuously, gave proof to farmers that valuable soil fertility is being lost by the latter practice.

Dairy Herd Improvement work made outstanding progress in 1940 under Extension leadership. At the end of the report year there were 159 herds comprising 6,889 cows in Associations. This is an increase of 13 herds and 661 cows over the number at the close of the previous testing year. The average production of all D.H.I.A. cows was 6,907 pounds of milk and 304 pounds of butterfat, an increase of 85 pounds of milk and 6 pounds of butterfat over 1939.

Weather conditions slightly lowered hay yields per acre in the State in 1940, but 1,011,000 tons of all types of hay was produced on 1,181,000 acres, as compared with 1,028,000 tons of 1,140,000 acres in 1939. However, the increase in hay in recent years has helped to make possible the expansion of the livestock industry. During the period from 1929 through 1938, North Carolina produced an average of 720,000 tons of hay on 884,000 acres annually.

Encouraging increases in the number of home orchards, and in the use of sprays and pruning equipment for improved management of fruit crops, was a feature of agricultural life in North Carolina in 1940. Orchards were the scenes of many of the 4,587 meetings at result demonstrations conducted by Extension agents, with a total attendance of 76,643 persons.



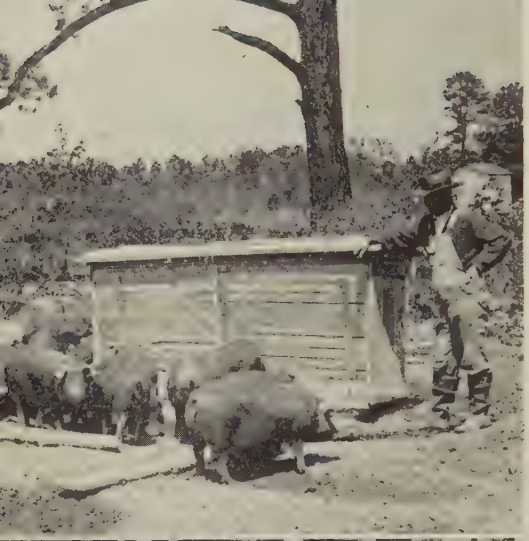
Show ring competition helped 4-H members to learn of better livestock types. Adults also benefitted from the competitive events in which purebred dairy and beef cattle, swine, poultry and other farm products were exhibited.

Strip-cropping was a soil conservation practice used on 49,550 acres on 2,409 farms in 1940. This practice is widely used in the 12 Soil Conservation Districts organized and assisted by the Extension Service, including two new districts set up during the past year. In addition, strip cropping is practiced on the Extension-TVA demonstration farms in the mountain section of the State.

Adult demonstration farmers produced higher yields of corn per acre than boys and girls conducting 4-H corn projects to provide one of the most encouraging features of the Extension program in 1940. Fifteen hundred adult farmers grew 211,260 bushels of corn on 4,925 demonstration acres, for an average yield of 42.9 bushels per acre. In 4-H Club work, 3,468 youths produced 151,694 bushels of corn on 4,014 acres, for an average of 37.7 bushels per acre. The average yield of all corn grown in the State in 1940 was 18.5 bushels per acre.

Sheep shearing and dipping demonstrations were conducted in the centers of this phase of the livestock industry in the State. Farmers sold 3,753 sheep and 49,840 pounds of wool cooperatively, and the wool pools alone enabled farmers to receive $2,492 more than they would have received for the wool in individual lots.

Small combines are rapidly replacing heavy harvesting and threshing equipment in North Carolina, and this is one of the principal reasons why production of small grains in North Carolina rose from 11,346,000 bushels in 1939 to 12,958,000 bushels in 1940. Wheat production increased from 5,100,000 bushels to 6,132,000 bushels; oats from 5,512,000 bushels to 5,952,000 bushels; barley from 220,000 to 308,000 bushels; and rye from 458,000 to 510,000 bushels.



Swine production was not as profitable in 1940 as in other years because of low prices, but the 14 Cooperative Livestock Marketing Associations, organized and assisted by Extension agents, sold 20,230 hogs for $215,995, of which $209,401 was net to farmers. Other Extension swine projects resulted in 7,019 farmers following disease-control recommendations and 4,229 farmers adopting parasite-control practices. Meat cutting and curing was also stressed. Six thousand hogs were raised by 2,754 boys and 53 girls as 4-H Club projects.

Recommended blue mold control measures were used effectively in 1940 by at least 290 tobacco growers who either fumigated or sprayed 87,970 square yards of plant beds to prevent disease damage. One of the major plant pathology projects of the year was blue mold control, and 52 meetings on the subject were attended by 2,642 growers. Thirty-four demonstrations were conducted by farmers.

A series of horse and mule clinics, designed to improve the health of workstock in the State, was started by the Extension Service, in cooperation with local veterinarians and others, just prior to the end of the 1940 report year. The clinics were well attended and gave promise of being worth thousands of dollars to owners of horses and mules.

Farm and home agents reported that 288,240 farm families in the State had a home garden in 1940, with 81,000 of the gardens listed as "year-round." AAA records show that 227,747 of the 234,083 farms cooperating in the Agricultural Conservation Program complied with the AAA garden practice.

Land Use Planning was conducted in 21 counties in 1940, and 18,822 persons attended 455 meetings, most of which were committee sessions. Neighborhood and community mapping, a new phase of the planning program, was completed in 17 counties during the year. Three unified counties were set up in 1940, and intensive reports were developed in three other counties.

One of the aims of Extension landscape work is to work with nature in developing rural houses and farmsteads into pleasing and inviting homes, with broad open lawns, adequate shade, and attractive shrubbery and flowers. During the past year 30,532 home grounds improvements were made; 2,867 method demonstration meetings were held; 1,044 adult result demonstrations were conducted; and 2,542 members of 4-H clubs completed home beautification projects.

Interest in boll weevil control was revived in 1940, and the new 1-1-1 pre-square mopping treatment was used to help keep weevil infestation below 10 per cent in the State. Sixty-two educational meetings were held to explain boll weevil control methods, and 2,788 farmers in 54 cotton producing counties attended.

Timber stand improvement was one of the leading Extension forestry projects of the year. In 87 counties farm agents reported that 2,387 land owners made improvement cuttings. Nine hundred and sixty-five farmers in 79 counties planted 3,539,659 forest seedlings for timber growing and erosion control.

A cotton improvement campaign, built around the One-variety Program, was a contributing factor to the highest cotton yields in the history of the State. Seventy-eight communities, including four entire counties, were organized and 4,850 farmers planted one-variety cotton on 81,984 acres. In 1939 the one-variety program was organized among 3,434 farmers planting 48,073 acres in 55 communities.

Farmers of North Carolina did not stop at earning their AAA payments in the use of lime for soil improvement. In carrying out soil building practices under the Agricultural Conservation Program, farmers applied 283,000 tons of ground limestone. But a total of 288,334 tons of lime was used in the State on 40,313 farms.

One of the important phases of Extension work is education by publications, news service, and radio. During the year nearly 2,000 pages of informational and news material, together with 30 mats and hundreds of photographs were sent to the newspapers of the State, and to farm journals and magazines circulating in the State. Twenty radio stations carried agricultural programs based on Extension material. Forty-seven publications, totaling 822,600 copies were published or reprinted in 1940. Over eight million pieces of mail were handled during the year.

During 1940 the Extension Service supervised the operation of heavy terracing equipment operated by 41 mutual soil conservation associations organized in Piedmont North Carolina. Terracing was also promoted with homemade V-drags and other light equipment. The result was that 75,219 acres were completely terraced on 4,565 farms during the year.

North Carolina continues to develop as a poultry producing State, as evidenced by the 12.9 per cent increase in the number of chickens and the 23.6 per cent increase in egg production during the past ten years. Poultry Extension work during the past year continued successfully, and 12 one-day district poultry schools and egg shows were held with an average attendance of 182 persons at each school. Poultry projects, involving 190,629 birds, were completed by 2,076 boys and 1,198 girls in 4-H Club work.

A honey yield 110 per cent of normal was harvested by beekeepers of North Carolina in 1940. Farmers who kept their bees in modern hives and used good management practices, as recommended by the Extension Service, made an average cash income of $9.51 per colony. The average income where old style box hives were used was $1.26 per colony. During the year 2,028 colonies were transferred to modern hives as the result of Extension influence.

Extension agents held 32,012 method demonstration meetings during the year, with a total attendance of 631,022 persons. Many of these meetings were held in the field, where adults and 4-H members studied planting, cultivation and harvesting practices. They learned, among other things, the type of equipment to use in harvesting their potato crops, such as the group pictured here are doing.

The tobacco crop in 1940 was "short" because of reductions in AAA allotments, made necessary by loss of export markets. However, the yield per acre was high, averaging 990 pounds. In addition to helping farmers to produce more high quality tobacco per acre, tobacco grading demonstrations were held throughout the flue-cured and Burley areas in cooperation with the Federal Agricultural Marketing Service. About 4,500 persons attended these "grading schools."

Assistance to farmers in marketing their products cooperatively included the organization of a mutual sweet potato association in Nash County, which resulted in high quality, well-graded and packed potatoes being placed on the market under the "Nasco" label. Crop Improvement work, a cooperative project of the Extension Service, enabled seed producers to sell 9,000 bushels of certified seed sweet potatoes.

A general Irish potato improvement campaign, in cooperation with other agencies, was conducted in Eastern Carolina during the year. A tour of the potato area was made in May, and a demonstration train was operated with the assistance of the Extension Service in February. One of the results was that more potatoes were washed and marketed in better condition than ever before in the history of the State.

Hat-making and care of millinery was learned by hundreds of the 36,214 women and girls in the 2,580 Home Demonstration and 4-H Clubs who had clothing as a major or minor project in 1940. Two thousand farm women supplemented their income to the extent of $44,689 by taking in sewing, and $196,894 is the estimated saving to adults and 4-H girls who learned more about the making, remodeling, care and wise purchasing of clothing.

Nearly 8,000 farm families followed Extension recommendations in refinishing, repairing and remodeling furniture in 1940. The House Furnishings Program in Home Demonstration and 4-H Clubs saved rural people an estimated $65,736, and the Home Management Program resulted in savings estimated at $152,636, for a total of $218,372.

Curb markets for Home Demonstration Club members provided an outlet for $401,108 worth of surplus farm products in 1940. In addition, farm women sold $298,787 worth of produce direct to merchants, hotels, institutions and individuals, and made and disposed of $25,376 worth of handicraft articles, for a total market value of $725,272. Four new curb markets were organized by home agents during the year, bringing to 48 the number of these cooperative marketing organizations.

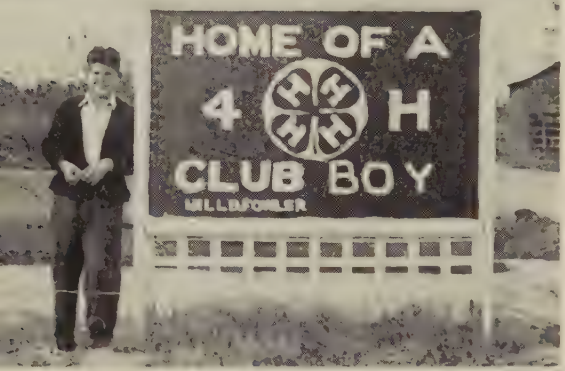
Men and women, boys and girls—young and old—engaged in the mattress-making program which began in North Carolina in May, 1940. By December 1, the end of the Extension report year, 28,304 mattresses had been made, and 1,214 voluntary leaders and 324 paid NYA and other workers were helping Extension and AAA forces to conduct the program in 1,045 communities.

Forty-three thousand farm families were assisted with their food preservation problems, and 7,621,712 containers of food valued at $1,141,513 were canned in 1940 by white and Negro farm families. Other achievements in food conservation include: 20,687 families filled a canned foods budget, and 1,859 pressure canners were bought during the year.

Rural electrification has brought to North Carolina farms many conveniences, including electric washers to eliminate the drudgery of "Monday Wash Day." The Extension Service helped farm people to secure and take advantage of the rural electric lines which were extended into 61,226 rural homes of the State in 1940.

Models of houses and home grounds were used by home agents and other Extension workers to teach home beautification, one of the most popular Home Demonstration Club projects of the year. Definite changes in practices resulted from the Extension program in 86,756 farm homes and 14,226 other homes. A large number of the 1,570 Home Demonstration Clubs in the State held their meetings in community centers, such as the one pictured here.

The annual 4-H Short Course attracted 992 delegates from 96 counties. A Health Festival, culminating in the crowning of the State 4-H king and queen of health from among district health champions pictured here, was one of the features of the week. The North Carolina 4-H health king was placed in the blue ribbon group at the National Club Congress, giving him the honor of being one of the five healthiest 4-H members in the Nation.



Members of 4-H Clubs in North Carolina are proud of their organization and of their achievements. Numbers of them, like the boy pictured here, have built signs to serve as an invitation to passers-by to stop and inspect 4-H demonstration projects.

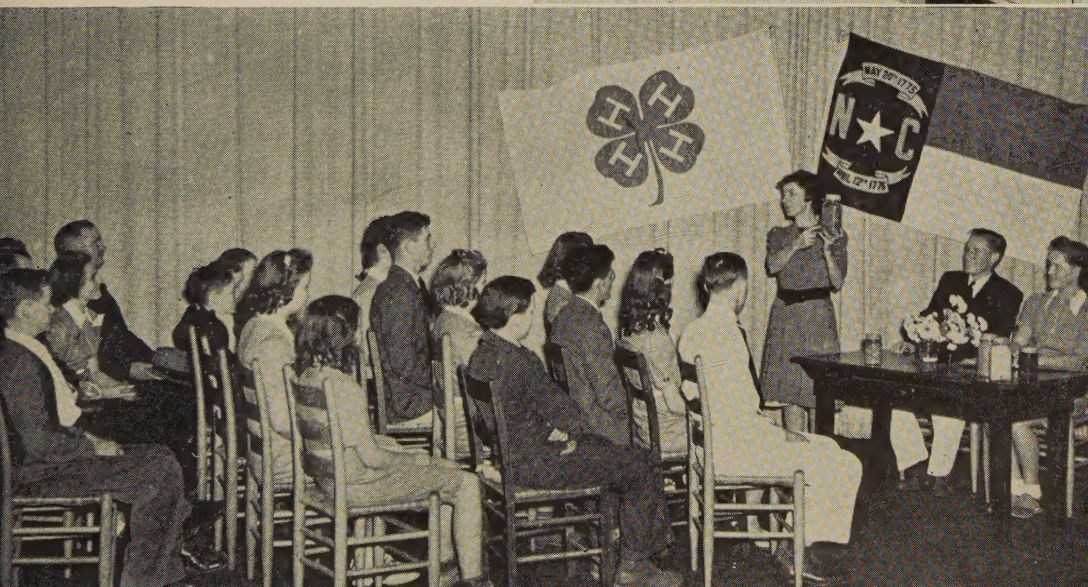
Peanuts are North Carolina's third-ranking cash crop. In 1940 the income to farmers from peanuts was $11,379,000, as compared with $10,465,000 in 1939. The average yield per acre of commercial peanuts was 1,275 pounds, the highest of any State where peanuts are produced. One reason for this is the sulphur dusting demonstrations sponsored by the Extension Service to control leafspot. Peanut projects were completed by 231 4-H Club members, who had an average yield of 1,540 pounds of nuts.

Vesper services were an important part of all of the 4-H encampments participated in by boys and girls from 99 of the State's 100 counties, and attended by 5,000 persons. Three permanent State camps for 4-H members were operated and supervised by the Extension Service in 1940.

Six hundred and twenty-eight members completed handicraft projects in the 4-H program of 1940, and handicrafts were taught most of the 5,000 boys and girls who attended 4-H camps. In the combined Home Demonstration and 4-H program, 22,139 articles were made for home use and articles valued at $25,376 were made and sold.

Food conservation ranked second among homemaking projects completed in 1940 by the 36,098 girls enrolled in the youth program. Canning projects were completed by 5,597 members who put up 244,238 quarts of food, 56,877 containers of jams and jellies, and 157,104 pounds of dried vegetables and fruits. Clothing was the most popular 4-H homemaking project, with 10,492 members successfully completing a year's work.

An increase of 84 clubs and 6,566 members over the previous year was achieved by the organized 4-H Club program in 1940. Sixty-eight per cent of the 55,632 boys and girls enrolled completed their projects. Extension agents were assisted by 3,118 local leaders in conducting the 4-H program, and 1,515 meetings were held by local leaders with a total attendance of 35,364.



RESULTS AND METHODS

Progress of Extension work is told in the following chart of results and methods, based on a statistical summary of the reports of all white and Negro farm and home agents, and assistant agents:

	1939	1940
(*) No. families influenced by Extension program	255,127	270,370
(*) No. farms on which definite changes resulted	222,800	239,066
No. Home Demonstration Clubs	1,520	1,570
No. members of Home Demonstration Clubs	38,011	40,402
No. 4-H Clubs	1,529	1,613
No. members of 4-H Clubs	49,066	55,632
(*) No. families having garden	183,541	288,240
(*) No. families having year-round garden	48,968	81,000
(*) No. families with poultry and eggs year-round	101,936	151,930
(*) No. families having cows	70,202	128,339
(*) No. farms using lime	24,485	40,313
(*) No. acres completely terraced	68,173	75,219
(*) No. farms applying recommended fertilizers	34,959	42,979
(*) No. farm and home visits made	201,563	212,682
(*) No. different farms and homes visited	104,308	105,516
(*) No. meetings conducted	60,374	63,569
(*) Attendance at meetings	1,733,059	1,684,191
Pct. of time devoted to AAA admin. work	14	12

(*) Some duplication of reports of White and Negro agents.

Half of the 41,823 Negro farms in the 33 counties in which Negro Extension work was conducted in 1940 were influenced by the program. There were 257 active Negro Home Demonstration Clubs with 6,050 members. Adult Negro farmers conducting corn-growing demonstrations averaged 44.1 bushels per acre, a higher yield than white adult demonstrators. Planning work, as pictured here, also was of interest to several Negro farm groups.

Of the 1,613 active 4-H Clubs in the State, 420 were Negro Clubs. Negro 4-H Club members totaled 15,088. They engaged in virtually all of the activities of white 4-H members, including radio broadcasting, which helps to develop Head, Heart, Hands and Health. Negro Corn Club members averaged 37.4 bushels per acre in their projects. The 11 Negro 4-H project champions had an average labor income per project of $102.73.

NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING
OF THE
UNIVERSITY OF NORTH CAROLINA
AND
U. S. DEPARTMENT OF AGRICULTURE, CO-OPERATING
N. C. AGRICULTURAL EXTENSION SERVICE
I. O. SCHAUB, DIRECTOR
STATE COLLEGE STATION
RALEIGH

DISTRIBUTED IN FURTHERANCE OF THE ACTS OF CONGRESS OF MAY 8 AND JUNE 30, 1914